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**TO:** Bellevue Transportation Commission

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**SUBJECT:** MultiModal Concurrency and Level of Service  
**Policy Options**

## INTRODUCTION

Previously, on December 13, 2013, staff and consultants from Fehr & Peers reviewed the “best practices” with respect to measuring level of service and using multimodal metrics for concurrency. The Commission directed staff to return with a range of policy options to move the City toward a multimodal methodology for calculating and monitoring level of service and concurrency. A policy recommendation would be embedded in the Transportation Element through the 2014 Comprehensive Plan Update. Council approval would provide the policy direction to develop a work plan and budget to develop and integrate multimodal metrics into the Transportation Element and the Traffic Standards Code ([BCC 14.10.060](#)).

This agenda item presents a range of policy options generated through discussion with the Transportation Commission on December 13. Staff will seek Commission direction on a preferred policy option(s).

## Commission Discussion

In a unanimous vote following a robust discussion, the Commission endorsed the development of a multimodal policy framework and methodology for measuring level of service and calculating concurrency.

Commissioners noted that the City is moving toward more multimodal metrics, but not in a comprehensive or transparent manner. The existing practice of defining different auto level of service (LOS) standards for each of the City’s mobility management areas implicitly accounts for mobility options and the density/diversity of land uses. While the current system reflects land use context, it does not clearly account for all modes of travel. In long range planning and project prioritization for the CIP, clear metrics for all modes would be helpful, but an overly complicated system is not preferred. Any new system should continue to recognize that expectations for traffic congestion are related to the type of location – commercial area vs residential neighborhood - and that the level of service for many roadways should retain a vehicular measure.

## Policy Options

At the meeting on January 9, 2014, staff and consultants from Fehr & Peers will present four policy options that represent a range of strategies that are not mutually exclusive. These are described in brief as follows:

- **Revise the Mobility Management Area Structure**

Bellevue established the Traffic Standards Code in 1989, in response to citizen concerns about rapid growth and increasing traffic congestion. In 1993, Mobility Management Areas (MMAs) were established in recognition that different areas of the City had different land use contexts, different transportation options, and different traffic congestion expectations. The original MMA boundaries were set to generally align with the impact fee boundaries at the time. With some minor revisions, the Traffic Standards Code and the MMAs have remained intact through today.

This policy option would revise and simplify the MMA boundaries to separate traditional suburban residential areas from mixed-use/transit-oriented areas. Within the traditional suburban areas, which are generally built-out with mostly residential uses, the current auto-oriented intersection-based LOS standard could remain; however, aspirational LOS targets for other modes (transit, walk, bicycle) could be incorporated to track progress on building the needed infrastructure for these other modes. Within the mixed-use/transit-oriented areas, LOS methods could include area-wide measures or corridor-based measures. For example, in downtown Bellevue/Wilburton, an overall level of traffic delay could be established. Similarly, a target for person throughput on transit or the percent completion of the planned system of sidewalks/bicycle facilities/mid-block crossings, etc could be established.

*Implications:*

- Similar structure to current system
- Could function well for both long-range planning and concurrency management
- Recognizes the fact that autos are the dominant form of travel in parts of the city
- Larger MMAs allow for more continuity along important travel corridors for both autos and transit
- Explicitly accounts for non-auto infrastructure investments and system quality
- More transparency for multimodal investments, particularly in urban areas of the city
- Would require some enhancements to the BKR travel demand model to implement

The precise MMLOS methodology would need to be defined

- **Corridor Approach**

In the corridor approach, the primary function of the roadway/transportation corridor is the basis for establishing and monitoring level of service standards, as opposed to the MMA which relates mobility to a geographic area. A layered network (each layer representing a travel mode) would be defined based on plans like the Downtown Transportation Plan and the city's modal plans – the Transit Master Plan for instance. For each facility type, a multimodal LOS method and standard would be defined. This standard would incorporate both design features and operational characteristics.

For instance, along a transit priority corridor, design standards would include the provision of transit signal priority, queue jumps at major intersections, and high quality pedestrian and bicycle facilities to access the transit stops. From an operations perspective, transit LOS-focused metrics could include transit speed and reliability and/or person throughput. Similarly, along a corridor with a primary function of moving vehicles, design features could include right-turn pockets or dual-left turns at intersections, median access control, and sidewalks. Operations could be evaluated using volume/capacity or corridor travel time methods.

For each corridor, the LOS would include the provision of basic facilities for the relevant non-primary modes. For example, on an auto-oriented corridor, the LOS could incorporate the need to provide adequate sidewalks and crossing opportunities and bicycle facilities on lower-volume streets where space exists. Multiple modes could be considered for a corridor—for example bicycles and transit on 108<sup>th</sup> Avenue NE in downtown or transit and autos on NE 8<sup>th</sup> Street.

The concept of an “ultimate facility” could also be included in this framework. When a street is built out to the maximum extent identified in the plans, it is defined as an ultimate facility and no additional right-of-way can be used to improve operational LOS. In this case, only operations strategies, such as signal coordination, transit signal priority, rechannelization, and other means would be used to optimize performance. Ultimate facilities recognize limitations with right-of-way and impacts to other modes once a facility reaches a given size.

MMAs would not be included in this approach, although it is possible to combine elements of a corridor and a zone-based approach. For example, various corridors could be defined throughout the city, while Downtown Bellevue could be retained as a network of streets.

*Implications:*

- Significant departure from current system
- Could function well for both long-range planning and concurrency management

- Defines the functional design of every transportation facility that is included in the system
- Explicitly recognizes non-auto modes for design and operational consideration
- Includes flexibility to vary the LOS standard in different parts of the City
- Corridor focus works well for transit and key auto corridors
- Would require the establishment of design standards for roadways, intersections, and pedestrian/bicycle facilities across the entire city
- Would require some enhancements to the BKR travel demand model to implement
- Would require that all modal, neighborhood, and other transportation plans be overlaid to identify synergies or conflicts – a “Transit Master Plan”
- May require additional policy direction or research to rectify competition between modes in areas with limited right-of-way

- **Mobility Units**

This approach is based on existing multimodal concurrency programs in Redmond and Bellingham, and could be a good option for concurrency management. In this approach, LOS is “simplified” into a single numerical value defined by “mobility units.” A mobility unit measures the amount of access transportation infrastructure provides within an area. While mobility units can be defined for an entire city, in the Bellevue context, they might best be defined for different areas area. This approach would require that a weighted “value” of mobility units be established for different areas of the city. For example, given the dense mix and diverse land uses in downtown Bellevue, pedestrian infrastructure would have more weight than it would in East Bellevue, where auto and potentially bicycle infrastructure would have a higher weight. Additionally, analysis would be needed to determine what infrastructure elements are included in the system, and which are not. For example, sidewalk projects in Bel-Red or downtown may be included since they substantially aid access for businesses, services, and residents; however, neighborhood sidewalk projects in Somerset may not be included.

The mobility unit LOS standards could be defined by the projects in the City’s modal plans by determining the amount of infrastructure that is required at a certain time horizon. This would increase accountability since the City would identify when it plans to complete certain infrastructure projects for the various modes. Since the mobility unit concept is geared toward concurrency management, it could be paired with one of the other methods in this memo for long-term planning.

*Implications:*

- Significant departure from current system
- This system is very well suited for a concurrency management system but not as a stand-alone planning tool. It could be combined with one of the other options in this memo for long-range planning

- Would require research to determine how mobility units are calculated for different parts of the City
- This method may require substantial work on the BKR model for evaluation since pedestrian and bicycle travel are important components
- A concurrency system based on mobility units would be much simpler and less costly to administer than the current system (once the initial setup has been completed)
- This system provides substantial flexibility for City staff and commission/council members to identify potential improvement projects that would improve LOS
- This system dovetails with the other approaches in this memo when they are used for long-range planning
- This system recognizes that different parts of the city have different mobility needs (e.g., suburban areas of the city are more auto-dependent)

- **Target-Based**

This is an “outcome” oriented approach where reasonable mobility targets are identified and projects are matched to meet the targets. In this sense, the targets are similar to LOS standards.

As an example, targets could be set for mode split, GHG emissions, or the number of jobs within a 20 minute transit commute. This option has the advantage of being closely tied to overall Comprehensive Plan transportation goals, but this would require substantial coordination with other elements of the Comprehensive Plan.

Depending on the targets that are set, the definition of and prioritization of projects can be less straightforward than other options. For example, mode split goals could be reached through a variety of projects and programs, there are more options to achieve the target—examples include capital projects like more pedestrian infrastructure or transit speed and reliability investments; however, programs and policies could be equally effective, including revised parking codes, mandatory participation in commute trip reduction programs, or a requirement to de-couple parking costs from rent. The target-based approach is used by other jurisdictions to monitor progress on a Comprehensive Plan, but it is rare for the targets to remain generally fixed (often, if a target is not being met, it is simply ‘kicked down the road’). For concurrency purposes, this option would likely need to be combined with either a more traditional LOS evaluation, or one of the options defined earlier.

*Implications:*

- Significant departure from current system
- Would require substantial coordination with other Comprehensive Plan elements (e.g. land use, capital facilities) and other plans/policies to ensure consistency and commitment to reach shared goals
- Very transparent link to long-term visions and goals for the city

- Flexibility to set different targets for different portions of the city
- High degree of accountability; straightforward to monitor progress
- May require substantial research and policy direction to establish targets
- This approach is well suited for long-term planning, but would likely need a complementary concurrency methodology (e.g., one of the other approaches mentioned in this memo)
- May require substantial investments in BKR travel demand model to forecast outcomes
- Project prioritization may be less clear than other methods
- Could be used as a monitoring framework coupled to alternative long-range planning and concurrency methodologies

### **Summary of How Policy Options Can be Used for Long-Range Planning and Concurrency Management**

As described at the prior Commission meeting, multimodal LOS for long-range planning and concurrency management are distinctly different and need not use the same methodology. Table 1 summarizes how the policy options are suited for use in long-range planning and concurrency:

**Table 1**

<b><i>Application</i></b>	<b><i>Refine MMAs</i></b>	<b><i>Corridor Approach</i></b>	<b><i>Mobility Units</i></b>	<b><i>Target-Based</i></b>
<i>Long-Range Planning</i>	Well suited	Well suited	Not recommended; combine with another approach	Well suited
<i>Concurrency Management</i>	Well suited	Well suited	Very well suited	Not recommended; combine with another approach

As noted above, the options to refine MMAs and the corridor approach are potentially well suited for both long-range planning and concurrency management. The mobility unit approach is not as well suited for long-range planning and the target-based approach is not a good fit for concurrency management.

Any of these approaches could be mixed and applied for different purposes. For example, the “Refined MMAs” approach could be used for long-range planning along with the “Mobility

Unit” approach for concurrency management. The “Target-based” option could be used to monitor performance and inform whether the long-range planning or concurrency standards need to be adjusted.

#### **NEXT STEPS**

A recommended policy option(s) from the Commission will be embedded in the update to the Transportation Element and forwarded to the Planning Commission. Council adoption of a multimodal level of service and concurrency policy would provide direction to develop a budget proposal for the 2015-16 budget.